

M. Wilson Reben
ENTERED

Page 1 of 7

#50



1600

RAW SEQUENCE LISTING

DATE: 06/17/2003

PATENT APPLICATION: US/08/812,393B

TIME: 15:01:17

Input Set : N:\EBONY\S\US08812393B.raw

Output Set: N:\CRF4\06172003\H812393B.raw

```
1 <110> APPLICANT: SHEERMAN, LINDA A.
2 LUSTGARTEN, JOSEPH
3 <130> TITLE OF INVENTION: RECOMBINANT CONSTRUCTS ENCODING T CELL RECEPTORS
4 SPECIFIC FOR HUMAN HLA-RESTRICTED TUMOR ANTIGENS
5 <130> FILE REFERENCE: 46147/5E793
C--> 6 <140> CURRENT APPLICATION NUMBER: US/08/812,393B
C--> 7 <141> CURRENT FILING DATE: 1997-03-08
8 <160> NUMBER OF SEQ ID NOS: 64
9 <170> SOFTWARE: PatentIn Ver. 2.1
11 <210> SEQ ID NO: 1
12 <211> LENGTH: 1332
13 <212> TYPE: DNA
14 <213> ORGANISM: Artificial Sequence
15 <220> FEATURE:
16 <221> NAME/KEY: CDS
17 <222> LOCATION: (1)..(1332)
18 <230> FEATURE:
19 <231> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
20 single chain TCR derivative nucleotide sequence
21 <4000> SEQUENCE: 1
22 ctc gag atg cag agg aac ctg gga ggt gtg ctg ggg att ctg tgg gtg 48
23 Leu Glu Met Gln Arg Asn Leu Gly Ala Val Leu Gly Ile Leu Trp Val
24 1 5 10 15
25 cag att tgc tgg ctg aaa gaa cag caa gtg cag cag agt ccc goa tcc 96
26 Gln Ile Cys Trp Leu Lys Glu Gln Val Gln Gln Ser Pro Ala Ser
27 20 25 30
28 ttg gtc ctg cag gag ggg gag aac gca gag ctg cag tgt agc ttt tcc 144
29 Leu Val Leu Gln Glu Gly Glu Asn Ala Glu Leu Gln Cys Ser Phe Ser
30 35 40 45
31 atc ttt aca aac cag gtg cag tgg ttt tac caa cgt cct ggg gga aga 192
32 Ile Phe Thr Asn Gln Val Gln Trp Phe Tyr Gln Arg Pro Gly Gly Arg
33 50 55 60
34 ctc gtc agc ctg ttg tac aat cct tct ggg aca aag cag agt ggg aga 240
35 Leu Val Ser Leu Leu Tyr Asn Pro Ser Gly Thr Lys Gln Ser Gly Arg
36 65 70 75 80
37 ctg aca tcc aca aca gtc att aaa gaa cgt cgc agc tct ttg cac att 288
38 Leu Thr Ser Thr Val Ile Lys Glu Arg Ser Ser Leu His Ile
39 85 90 95
40 tcc tcc tcc cag atc aca gac tca ggc act tat ctg tgt gcc tca aat 336
41 Ser Ser Ser Gln Ile Thr Asp Ser Gly Thr Tyr Leu Cys Ala Ser Asn
42 100 105 110
43 tct gga gga agc aat gca aag cta acc ttc ggg aaa ggc act aaa ctg 384
44 Ser Gly Gly Ser Asn Ala Lys Leu Thr Phe Gly Lys Gly Thr Lys Leu
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RAW SEQUENCE LISTING

DATE: 06/17/2003

PATENT APPLICATION: US/08/812,393B

TIME: 15:01:11

Input Set : N:\EBONY\S\US08812393B.raw

Output Set: N:\CRF4\06172003\H812393B.raw

45		115		120		125		
46	tct gtt aaa tca ggt ggc gga ggg tct ggc ggg ggt gga tcc ggg ggt	432						
47	Ser Val Lys Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly							
48	130	135	140					
49	gga ggc tca gag ggt gca gtc acc caa agc cca aca aac aag gtg gac	480						
50	Gly Gly Ser Glu Ala Val Thr Gln Ser Pro Arg Asn Lys Val Ala							
51	145	150	155	160				
52	gta aca gga ggc aag gtg aca ttg agc tgt aat cag act aat aac cag	528						
53	Val Thr Gly Gly Lys Val Thr Leu Ser Cys Asn Gln Thr Asn Asn His							
54	165	170	175					
55	aac aac atg tac tgg tat cgg cag gac aag ggg cat ggg ctg aag ctg	576						
56	Asn Asn Met Tyr Trp Tyr Arg Gln Asp Thr Gly His Gly Leu Arg Leu							
57	180	185	190					
58	atc cat tat tca tat ggt ggt ggc agc act gag aca gga gat atc cat	624						
59	Ile His Tyr Ser Tyr Gly Ala Gly Ser Thr Glu Lys Gly Asp Ile Pro							
60	195	200	205					
61	gat gga tcc aag ggc tcc aga cca agc caa gag aac ttc tcc ctg att	672						
62	Asp Gly Tyr Lys Ala Ser Arg Pro Ser Gln Glu Asn Phe Ser Leu Ile							
63	210	215	220					
64	ctg gag ttg ggt acc ccc tct cag aca tca gtg tac ttc tat gcc agc	720						
65	Leu Glu Leu Ala Thr Pro Ser Gln Thr Ser Val Tyr Phe Cys Ala Ser							
66	225	230	235	240				
67	ggt gag aca ggc acc aac gaa aga tta ttt ttc ggt cat gga acc aag	768						
68	Gly Glu Thr Gly Thr Asn Glu Arg Leu Phe Phe Gly His Gly Thr Lys							
69	245	250	255					
70	ctg tct gtc ctg act agt aac tcc atc atg tac ttc agc ccc ttc gtc	816						
71	Leu Ser Val Leu Thr Ser Asn Ser Ile Met Tyr Phe Ser His Phe Val							
72	260	265	270					
73	cag gtc ttc ctg cca ggc aag ccc acc aag aag cca gag cag cga cca	864						
74	Pro Val Phe Leu Pro Ala Lys Pro Thr Thr Thr Pro Ala Pro Arg Pro							
75	275	280	285					
76	cca aca cag ggc ccc acc atc ggc tgg cag ccc ctg tcc ctg cgc cca	912						
77	Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro							
78	290	295	300					
79	tct agt tct aga gat ccc aaa ctg tgc tac ctg ctg gat gga atc ctg	960						
80	Ser Ser Ser Arg Asp Pro Lys Leu Cys Tyr Leu Leu Asp Gly Ile Leu							
81	305	310	315	320				
82	ttc atc tat ggt gtc att ctg act gcc ttg ttc ctg aga gtg aag ttc	1008						
83	Phe Ile Tyr Gly Val Ile Leu Thr Ala Leu Phe Leu Arg Val Lys Phe							
84	325	330	335					
85	agc agg acc gca gac gcc ccc ggc tac cag cag gcc cag aac cag ctg	1056						
86	Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu							
87	340	345	350					
88	tat aac gag ctg aat cta cga cga aga gag gag tac gat gtt ttg gcc	1104						
89	Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Asp							
90	355	360	365					
91	aag aga cgt ggc cgg gac cct gag atg ggg gga aag ccc aga agg aag	1152						
92	Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys							
93	370	375	380					

RAW SEQUENCE LISTING

DATE: 06/17/2003

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TIME: 15:01:17

Input Set : N:\EBONY'S\US08812393B.raw

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94      aac cct cac gaa ggc ctg tac aat gaa ctg cag aaa gat aag atg ggc      1200
95      Asn Pro Glu Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
96      385              390              395              400
97      gag gcc tac agt gag att ggg atg aaa ggc gag cgc cgg agg ggc aag      1248
98      Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
99      405              410              415
100     ggg cac gat gcc ctt tac cag ggt ctc agt aca gcc acc aag gac acc      1296
101     Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
102     420              425              430
103     tac gac gcc ctt cac atg cag gcc ctg ccc cct cgc taa ggc gcc gcc      1344
104     Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
105     435              440
106     acc ggc      1350
107 <110> SEQ ID NO: 2
108 <111> LENGTH: 444
109 <112> TYPE: PRT
110 <113> ORGANISM: Artificial Sequence
111 <120> FEATURE:
112 <23> OTHER INFORMATION: Description of Artificial Sequence: Synthetic
113 single chain TCR protein
114 <400> SEQUENCE: 1
115     Leu Glu Met Gln Arg Asn Leu Gly Ala Val Leu Gly Ile Leu Trp Val
116     1              5              10              15
117     Gln Ile Cys Trp Leu Lys Glu Gln Gln Val Gln Gln Ser Pro Ala Ser
118     20              25              30
119     Leu Val Leu Gln Glu Gly Glu Asn Ala Glu Leu Gln Cys Ser Phe Ser
120     35              40              45
121     Ile Phe Thr Asn Gln Val Gln Trp Phe Tyr Gln Arg Pro Gly Gly Arg
122     50              55              60
123     Leu Val Ser Leu Leu Tyr Asn Pro Ser Gly Thr Lys Gln Ser Gly Arg
124     65              70              75              80
125     Leu Thr Ser Thr Thr Val Ile Lys Glu Arg Arg Ser Ser Leu His Ile
126     85              90              95
127     Ser Ser Ser Gln Ile Thr Asp Ser Gly Thr Tyr Leu Cys Ala Ser Asn
128     100             105             110
129     Ser Gly Gly Ser Asn Ala Lys Leu Thr Phe Gly Lys Gly Thr Lys Leu
130     115             120             125
131     Ser Val Lys Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
132     130             135             140
133     Gly Gly Ser Glu Ala Ala Val Thr Gln Ser Pro Arg Asn Lys Val Ala
134     145             150             155             160
135     Val Thr Gly Gly Lys Val Thr Leu Ser Cys Asn Gln Thr Asn Asn His
136     165             170             175
137     Asn Asn Met Tyr Trp Tyr Arg Gln Asp Thr Gly His Gly Leu Arg Leu
138     180             185             190
139     Ile His Tyr Ser Tyr Gly Ala Gly Ser Thr Glu Lys Gly Asp Ile Pro
140     195             200             205
141     Asp Gly Tyr Lys Ala Ser Arg Pro Ser Gln Glu Asn Phe Ser Leu Ile
142     210             215             220

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RAW SEQUENCE LISTING

DATE: 16/17/2003

PATENT APPLICATION: US/08/812,393B

TIME: 15:01:17

Input Set : N:\EBONY'S\US08812393B.raw

Output Set: N:\CRF4\06172003\H812393B.raw

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144 Leu Glu Leu Ala Thr Pro Ser Gln Thr Ser Val Tyr Phe Cys Ala Ser
145 235 230 235 240
146 Gly Glu Thr Gly Thr Asn Glu Arg Leu Phe Phe Gly His Gly Thr Lys
147 245 250 255
148 Leu Ser Val Leu Thr Ser Asn Ser Ile Met Tyr Phe Ser His Phe Val
149 260 265 270
150 Pro Val Phe Leu Pro Ala Lys Pro Thr Thr Thr Pro Ala Pro Arg Pro
151 275 280 285
152 Pro Thr Pro Ala Pro Thr Ile Ala Ser Gln Pro Leu Ser Leu Arg Pro
153 290 295 300
154 Ser Ser Ser Arg Asp Pro Lys Leu Cys Tyr Leu Leu Asp Gly Ile Leu
155 305 310 315 320
156 Phe Ile Tyr Gly Val Ile Leu Thr Ala Leu Phe Leu Arg Val Lys Phe
157 325 330 335
158 Ser Arg Ser Ala Asp Ala Pro Ala Tyr Gln Gln Gly Gln Asn Gln Leu
159 340 345 350
160 Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp Val Leu Arg
161 355 360 365
162 Lys Arg Arg Gly Arg Asp Pro Glu Met Gly Gly Lys Pro Arg Arg Lys
163 370 375 380
164 Asn Pro Gln Glu Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Met Ala
165 385 390 395 400
166 Glu Ala Tyr Ser Glu Ile Gly Met Lys Gly Glu Arg Arg Arg Gly Lys
167 405 410 415
168 Gly His Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr
169 420 425 430
170 Tyr Asp Ala Leu His Met Gln Ala Leu Pro Pro Arg
171 435 440

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173 <210> SEQ ID NO: 3

174 <211> LENGTH: 24

175 <212> TYPE: DNA

176 <213> ORGANISM: Artificial Sequence

177 <220> FEATURE:

178 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer

179 <400> SEQUENCE: 3

180 cccaaggcac tgatgttcac ctto

24

182 <210> SEQ ID NO: 4

183 <211> LENGTH: 17

184 <212> TYPE: DNA

185 <213> ORGANISM: Artificial Sequence

186 <220> FEATURE:

187 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer

188 <400> SEQUENCE: 4

189 tgagacaaag tccccaatct ctgacag

27

191 <210> SEQ ID NO: 5

192 <211> LENGTH: 26

193 <212> TYPE: DNA

194 <213> ORGANISM: Artificial Sequence

195 <220> FEATURE:

RAW SEQUENCE LISTING

DATE: 06/17/2003

PATENT APPLICATION: US/08/812,393B

TIME: 15:01:17

Input Set : N:\EBONY'S\US08812393B.raw

Output Set: N:\CRF4\06172003\H812393B.raw

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136 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
147 <400> SEQUENCE: 5
148      ctgcagctgc tctcaagta ctatc      26
149 <210> SEQ ID NO: 6
150 <211> LENGTH: 18
151 <212> TYPE: DNA
152 <213> ORGANISM: Artificial Sequence
153 <220> FEATURE:
154 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
155 <400> SEQUENCE: 6
156      tctcggagaa ggctccacgt tctcttt      28
157 <210> SEQ ID NO: 7
158 <211> LENGTH: 29
159 <212> TYPE: DNA
160 <213> ORGANISM: Artificial Sequence
161 <220> FEATURE:
162 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
163 <400> SEQUENCE: 7
164      gaagcagcag agggtttgaa gccacatac      29
165 <210> SEQ ID NO: 8
166 <211> LENGTH: 27
167 <212> TYPE: DNA
168 <213> ORGANISM: Artificial Sequence
169 <220> FEATURE:
170 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
171 <400> SEQUENCE: 8
172      gccacgtctt cagttgctta tgaaggt      27
173 <210> SEQ ID NO: 9
174 <211> LENGTH: 27
175 <212> TYPE: DNA
176 <213> ORGANISM: Artificial Sequence
177 <220> FEATURE:
178 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
179 <400> SEQUENCE: 9
180      gggtctctct cagggtccag aatatgt      27
181 <210> SEQ ID NO: 10
182 <211> LENGTH: 27
183 <212> TYPE: DNA
184 <213> ORGANISM: Artificial Sequence
185 <220> FEATURE:
186 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
187 <400> SEQUENCE: 10
188      gccaaqaact caccctggac tgttcat      27
189 <210> SEQ ID NO: 11
190 <211> LENGTH: 30
191 <212> TYPE: DNA
192 <213> ORGANISM: Artificial Sequence
193 <220> FEATURE:
194 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer

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VERIFICATION SUMMARY

DATE: 06/17/2003

PATENT APPLICATION: US/08/812,393B

TIME: 15:01:18

Input Set : N:\EBONY'S\US08812393B.raw

Output Set: N:\CRF4\06172003\H812393B.raw

L:6 M:270 C: Current Application Number differs, Wrong Format

L:7 M:271 C: Current Filing Date differs, Replaced Current Filing Date

STATISTICS SUMMARY

DATE: 06/17/2003

PATENT APPLICATION: US/08/812,393B

TIME: 15:01:18

Input Set : N:\EBONY'S\US08812393B.raw

Output Set: N:\CRF4\06172003\H812393B.raw

Application Serial Number: US/08/812,393B

Alpha or Numeric or Xml: Numeric

Application Class:

Application File Date: 03-08-1997

Art Unit: 1600

Software Application: PatentIN2.1

Total Number of Sequences: 64

Total Nucleotides: 3155

Total Amino Acids: 875

Number of Errors: 0

Number of Warnings: 0

Number of Corrections: 2

MESSAGE SUMMARY

270 C: 1 (Current Application Number differs)

271 C: 1 (Current Filing Date differs)